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SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
P.O. BOX 2938  
MINNEAPOLIS, MN 55402

EXAMINER

CHAI, LONGBIT

ART UNIT PAPER NUMBER

2131

DATE MAILED: 09/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/914,127

Applicant(s)

WAJS, ANDREW AUGUSTINE

Examiner

Longbit Chai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1 – 16 have been examined in an amendment filed on 8/7/2006.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/7/2006 has been entered.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because the claim language "containing the control words in an encrypted manner using a second key" is insufficient antecedent basis without a first key being recited for this limitation in the claim. Any other claims not addressed are rejected by virtue of their dependency should also be corrected.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 11 and 13 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maillard (Patent Number: EP 0912052 A1), in view of Morrison (Patent Number: 5815671), and in view of Wendorf (Patent Number: 5469431).

As per claim 1 and 14, Maillard teaches a method for controlling the use of a program signal in a broadcast system, comprising one or more broadcasters and a number of receivers, at least a part of the receivers preferably having a storage medium for storing program signals, wherein the program signal comprises content signals of a first and a second type, wherein the second type of content signals is inserted in time slots in the first type of content signals, wherein at least the first type of content signals is scrambled using control words as scrambling keys to obtain a scrambled program signal and wherein the scrambled program signal is broadcasted together with entitlement control messages (ECMs) containing the control words in an encrypted manner using a second key, wherein decrypting means are provided at each receiver for retrieving the control words from the ECMs by decrypting the ECMs, and wherein the decryptor processes the ECMs to deliver the control words for descrambling the

program signal (Maillard, see for example, Paragraph [0003], [0033], [0037], [0056] and [0057]).

Maillard does not disclose expressly that:

at least a plurality of ECMs comprises control information to control the decrypting means in such a manner that at least the time slots for second type of content signals are maintained in the first type of content signals, wherein

the decryptor processes the ECMs in accordance with the control information by ensuring that the delay between ECMs is such that a specified duration of the time slot is maintained, and

Morrison teaches (a) at least a plurality of said ECMs containing the control words in an encrypted manner further comprises control information to control the decrypting means in such a manner that at least the time slots for second type of content signals are maintained in the first type of content signals (Morrison, see for example, Abstract Line 5 – 18, Column 7 Line 17 – 22, Column 2 Line 65 – Column 3 Line 15 and Column 11 Line 11 – 25), and (b) wherein the control words are delivered by the decryptor for descrambling the program signal, and wherein at least a plurality of ECMs comprises control information to control the decryptor in such a manner that the decryptor processes ECMs to deliver decrypted control words for descrambling at least the first type of content signals so as to maintain at least the time slots for second type of content signals in the first type of content signals during playback of the program signal (Morrison, see for example, Column 7 Line 49 – 65 and Column 11 Line 20 – 25): Morrison teaches a number of unique options are available and include a format for the

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presentation of audio/video commercials (i.e. advertisement) and other message materials without interfering with the delivery of the program materials within which the message materials are to be inserted; and message materials may be targeted at specific program subscriber groups and specific program categories (Morrison, see for example, Abstract Line 5 – 10). Examiner notes the specific program and commercial / advertisement message materials are interpreted as the 1<sup>st</sup> and the 2<sup>nd</sup> type of contents signals respectively to meet the claim languages. Morrison further teaches the entertainment materials are electronically supplied in a unique format of the program and message materials selectively interspersed with program break flags and message flags; and the flags identify and provide pre-selected access to the materials previously determined by the subscriber's service (Morrison, see for example, Abstract Line 10 – 15). Thereby, Examiner notes program break flags and message flags, as taught by Morrison, can thus be considered as part of the ECM because Maillard teaches the access criteria of the broadcast program is indeed part of the ECM (Maillard, see for example, Column 7 Line 17 – 22). Morrison also discloses that in operation, the encoded audio or video program materials, message materials, and respective program break and message code flags are transmitted in encoded form to the multitude of receivers, where all the received information is stored in real time in respective storage locations (Morrison, see for example, Column 3 Line 64 – Column 4 Line 13).

Furthermore, Morrison teaches the program break flags indicate where (i.e. delay as interpreted by Examiner) message materials (i.e. 2<sup>nd</sup> type of content signals) are to be inserted in the program material (i.e. 1<sup>st</sup> type of content signals), and the message flags

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identify the specific message to be inserted as well as provide time related information (Morrison, see for example, Abstract Line 15 – 18 and Column 11 Line 11 – 25).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Morrison within the system of Maillard because Morrison teaches an efficient and practical method to insert a variety of services containing commercial or other message services into the routine program material in a relative and real-time manner (Morrison: see for example, Column 1 Line 38 – 50 and Column 11 Line 20 – 25).

Maillard as modified teaches the timing management method for the control information (Morrison: Abstract). However, Maillard as modified does not explicitly disclose using the time-slots of TDM technique. Examiner notes Official Notice is taken that the use of real-time time-slots of TDM technique is one of the well-known methods in the field. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the time-slots of TDM technique to associate the timing management method for the control information as taught by Maillard. Besides, the TDM technique is well known in the field of real-time broadcasting system; for example, as shown in the prior art of Wendorf.

Wendorf teaches the broadcasting service type of program including ECM (Wendorf, see for example, column 6 Line 45) can be managed in dynamic time-slot manner (Wendorf, see for example, column 2 Line 65 – 67).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wendorf within the system of Maillard

as modified because (a) Maillard as modified teaches the insertion of message material into the program material in relative and real-time manner (Morrison: see for example, Column 11 Line 11 – 17), and (b) Wendorf further teaches an efficient and practical method to maximize the total system transmission by re-assigning the time slots and making this time-slot re-assignment user-invisible (Wendorf: see for example, Column 2 Line 64 – 67).

As per claim 2, Maillard as modified teaches the claimed invention as described above (see claim 1). Maillard as modified further teaches a real time clock is operated at the receiver side, wherein the control information of an ECM near the beginning of a time slot for the second type of content signals indicates a delay before a next ECM can be decrypted by the decrypting means (Morrison: see for example, Column 11 Line 20 – 25 and Column 7 Line 49 – 65 and Column 3 Line 5 – 15) & (Wendorf: see for example, Column 2 Line 65 – 67).

As per claim 3 and 15, Maillard as modified teaches the claimed invention as described above (see claims 1 and 14 respectively). Maillard as modified further teaches the ECMs comprise first ECMs for the first type of content signals and second ECMs for the second type of content signals, wherein at least a plurality of first and second ECMs is provided with control information, wherein the decrypting means checks the control information and delivers decrypted control words of the first or second ECMs in accordance with the control information to descramble content signals



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of the first or second type, respectively (Maillard, see for example, Paragraph [0033], [0037]) & (Morrison: see for example, Column 2 Line 65 – Column 3 Line 15, Column 7 Line 49 – 65 and Column 3 Line 5 – 15).

As per claim 4, Maillard as modified teaches the claimed invention as described above (see claim 3). Maillard as modified further teaches the control information of said plurality of ECMs comprises timing information, wherein a real time clock is operated at the receiver side, wherein the decrypting means checks the timing information of each ECM by means of the real time clock and continues to deliver control words of the ECMs for descrambling the program signal only if the timing information corresponds with the time indication provided by the real time clock (Maillard, see for example, Paragraph [0033], [0037]) & (Morrison: see for example, Column 11 Line 15 – 16, Column 3 Line 5 – 15 and Column 7 Line 59 – 65).

As per claim 5 and 16, Maillard as modified teaches the claimed invention as described above (see claims 4 and 14 respectively). Maillard as modified further teaches a sequence identifier and a minimum delay which should pass before a next ECM should be decrypted are added to said plurality of ECMs as timing information, wherein the decrypting means checks the time passed by means of the real time clock and continues to deliver a next control word only if the time passed corresponds with the minimum delay (Morrison: see for example, Column 11 Line 20 – 25 and Column 7

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Line 49 – 65 and Column 3 Line 5 – 15) & (Wendorf: see for example, Column 2 Line 65 – 67).

As per claim 6, Maillard as modified teaches the claimed invention as described above (see claim 1). Maillard as modified further teaches the control information of the ECMs comprises a sequence identifier including an index number of the previous and/or next ECMs, wherein the decrypting means checks the index number of a received ECM against the expected index number, wherein the control word is only provided if the index number received matches the expected index number (Wendorf: see for example, Column 6 Line 45 and Column 10 Line 50 – 58).

As per claim 7, Maillard as modified teaches the claimed invention as described above (see claim 1). Maillard as modified further teaches the control information of an ECM comprises information on the insertion of the second type of content signals in the first type of content signals (Morrison: see for example, Column 7 Line 49 – 65).

As per claim 8, Maillard as modified teaches the claimed invention as described above (see claim 3). Maillard as modified further teaches at least a plurality of first ECMs provides control information for the decrypting means indicating the decrypting means to use a plurality of second ECMs, wherein the control information may comprise timing information on the time period for using first ECMs and on the time period for using second ECMs, and information on the point within the first type of content signals

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for inserting the second type of content signals (Morrison: see for example, Column 7 Line 49 – 65).

As per claim 9, Maillard as modified teaches the claimed invention as described above (see claim 8). Maillard as modified further teaches the second type of content signals comprise content signals with corresponding ECMs representing various contents, wherein the control information of at least a part of said plurality of first ECMs comprises selection identifiers for allowing only a selected content signal with corresponding ECMs to be used for insertion into the first type of content signals as second type of content signals, wherein in particular the selection identifiers select the content signal depending on the time of the day (Morrison: see for example, Column 6 Line 58 – 61, Column 7 Line 5 – 11, and Column 2 Line 55 – 65).

As per claim 10, Maillard as modified teaches the claimed invention as described above (see claim 8). Maillard as modified further teaches the decrypting means enforces the receiver to use all second ECMs corresponding to the time period indicated for using the second ECMs independent of the receiver being tuned to the corresponding program signal source (Morrison: see for example, Column 3 Line 11 – 15).

As per claim 11, Maillard as modified teaches the claimed invention as described above (see claim 1). Maillard as modified further teaches the ECMs are inserted in the

program signal in synchronisation with the change of the control words used to scramble the program signal (Morrison: see for example, Column 3 Line 11 – 15).

As per claim 13, Maillard as modified teaches the claimed invention as described above (see claim 3). Maillard as modified further teaches an ECM of the first ECMs for the first type of content signals comprises control information to switch the decrypting means to deliver only first ECMs for the first type of content signals if the decrypting means indicate a viewing mode allowing the use of the first content signals only (Morrison: see for example, Column 2 Line 35 – 38).

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maillard (Patent Number: EP 0912052 A1), in view of Morrison (Patent Number: 5815671), in view of Wendorf (Patent Number: 5469431), and in view of Takahisa (Patent Number: 5577266).

As per claim 12, Maillard as modified teaches the claimed invention as described above (see claim 1 – 11). Maillard as modified does not expressly disclose wherein the decrypting means is provided as a software module broadcasted by a broadcaster, wherein the software module is executed in the receivers, wherein the software module is regularly changed by the broadcaster.

Takahisa teaches wherein the decrypting means is provided as a software module broadcasted by a broadcaster, wherein the software module is executed in the

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receivers, wherein the software module is regularly changed by the broadcaster (Takahisa, see for example, Column 14 Line 10 – 15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Takahisa within the system of Maillard as modified because Takahisa teaches an efficient method to extend software download capability to provide the updated system software for use directly by the receiver (Wendorf: see for example, Column 1 Line 59 – 62 and Column 2 Line 64 – 67).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Longbit Chai  
Examiner  
Art Unit 2131

LBC



AYAZ SHEIKH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100